

AGENDA
TRAFFIC COMMISSION MEETING
CITY HALL COUNCIL CHAMBERS – July 16, 2020 – 4:00 P.M.

I. Meeting called to order – Roll Call

II. Approval of minutes from previous meeting (February 20, 2020)

III. Consent Item(s)

IV. Old Business

None.

V. New Business

- 1) Consider a request (20-6) from LETA to install “NO TRUCKS” SIGNS on SW “C” Avenue from SW 2nd Street to SW 6th Street.
- 2) Consider a request (20-7) from Michael Cleghorn to adopt a neighborhood traffic calming policy.
- 3) Consider a request (20-8) from Max Sasseen for the installation of traffic signals by private developer at the intersection of NW 50th Street and Cache Road in accordance with the traffic impact study.

VI. Audience Participation

VII. Adjournment

The City of Lawton encourages participation from all of its citizens. If participation at any public meeting is not possible due to a disability, please notify the City Clerk at (580) 581-3305 at least 48 hours prior to the schedule meeting to make the necessary accommodations. The City may waive the 48 hour rule if signing interpreters for the deaf are not necessary.

**TRAFFIC COMMISSION MINUTES
CITY HALL COUNCIL CHAMBERS
February 20, 2020 – 4:00 P.M.**

I. Meeting called to order – Roll Call

The meeting was called to order at 4:00 p.m. in the City Hall Council Chambers (212 SW 9th St.) by David Means. The meeting notice and agenda were posted on the City Hall (212 SW 9th St.) bulletin board as required by State law.

MEMBERS PRESENT: Carl Dentler, David Means, Robert Kelso, Hershel Kuykendall and Ted Warkentin

ALSO PRESENT: Larry Wolcott, Public Works Director, Cindy Porter, Traffic Commission Secretary, Sgt. Jacob Ferrero, LPD and Charles Barnett

MEMBERS ABSENT: Paula Bowen

II. Approval of minutes from previous meeting (November 21, 2019) MOVED BY: Kelso; **SECOND BY:** Warkentin to accept the minutes as written. **AYE:** Dentler, Means, Kelso, Kuykendall and Warkentin; **NAY:** None; **ABSTAIN:** None

III. Consent Item(s)

None

IV. Old Business

None

V. New Business

- 1) Consider a request **(20-1)** from Tammy Huffman to install STOP signs on SW Rolling Hills Drive at 44th Street.

Wolcott stated that this is a local, 4-way controlled with YIELD signs on Rolling Hills. Sight distance at NE and SW corners of the intersection warrant installation of STOP signs, due to roadway alignment and residential, wooden privacy fences. Staff recommends installing STOP signs on SW Rolling Hills Drive at 44th Street.

MOVED BY: Kuykendall; **SECOND BY:** Kelso to accept staff recommendation to install STOP signs on SW Rolling Hills Drive at 44th Street. **AYE:** Dentler, Means, Kelso, Kuykendall and Warkentin; **NAY:** None; **ABSTAIN:** None

- 2) Consider a request **(20-2)** from Howard Hampton to install NO PARKING signs on west side of SW Sheridan Road at Bishop Public School.

Wolcott stated that Mr. Hampton is the Superintendent of Bishop Public School. Lawton City Code 23-6-601 - Stopping, standing or parking prohibited in certain places: No person shall stop, stand or park a vehicle, except when necessary to avoid a conflict with other traffic or in compliance with law or ordinance or the directions of a police officer or traffic-control device, in any of the following places: At any place where official signs prohibit stopping, standing or parking. Staff recommends installing NO PARKING signs on west side of SW Sheridan Road, along Bishop Public School Frontage.

MOVED BY: Dentler; **SECOND BY:** Kelso to accept staff recommendation to install NO PARKING signs on west side of SW Sheridan Road, along Bishop Public School Frontage. **AYE:** Dentler, Means, Kelso, Kuykendall and Warkentin; **NAY:** None; **ABSTAIN:** None

- 3) Consider a request **(20-3)** from an Anonymous Citizen to install NO 'U' TURN sign on eastbound NW Cache Road at 20th Street.

Wolcott stated that this is a median opening/ turn bay for westbound left turns into private property with an existing sign prohibiting eastbound left turns. Staff recommends installing combination NO 'U' TURN/ NO LEFT TURN sign on eastbound NW Cache Road at 20th Street.

MOVED BY: Kuykendall; **SECOND BY:** Dentler to accept staff recommendation to install combination NO 'U' TURN/ NO LEFT TURN sign on eastbound NW Cache Road at 20th Street. **AYE:** Dentler, Means, Kelso, Kuykendall and Warkentin; **NAY:** None; **ABSTAIN:** None

- 4) Consider a request **(20-4)** from John O'Doherty to install STOP or YIELD signs at the intersection of NW 80th and Lawton.

Wolcott stated that this a local, 4-way, uncontrolled intersection. STOP signs are warranted on minor approach (NW Lawton) based upon sight distances. Staff recommends installing STOP signs on NW Lawton Ave. at 80th Street.

MOVED BY: Kelso; **SECOND BY:** Warkentin to accept staff recommendation to install STOP signs on NW Lawton Ave. at 80th Street. **AYE:** Dentler, Means, Kelso, Kuykendall and Warkentin; **NAY:** None; **ABSTAIN:** None

- 5) Consider a request **(20-5)** from Council Member Fortenbaugh to install STOP or YIELD signs at the intersection of SW 71st and Cherokee.

Wolcott stated that this a local, 4-way, uncontrolled intersection. STOP signs are warranted on minor approach (SW Cherokee) based upon sight distances. Staff recommends installing STOP signs on SW Cherokee Avenue at 71st Street.

MOVED BY: Kuykendall; **SECOND BY:** Warkentin to accept staff recommendation to install STOP signs on SW Cherokee Avenue at 71st Street. **AYE:** Dentler, Means, Kelso, Kuykendall and Warkentin; **NAY:** None; **ABSTAIN:** None

VI. Audience Participation

None

VII. Adjournment

4:11 p.m.

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TRAFFIC ISSUE REQUEST

PUBLIC WORKS DEPARTMENT

Administrative Office

Mailing Address – 212 SW 9th Street, Lawton, OK 73501
Shipping Address – 2202 SW 3rd Street, Lawton, OK 73501
Phone (580) 581-3410 • Fax (580) 581-3421

www.cityoflawton.ok.us

Requested by: Lawton Enhancement Trust Authority (LETA)	Request Number: 20-6
Address:	Date Request Received: 2-28-20
City, State, Zip: Lawton, OK	Phone/Email: 581-3375
Request: Install NO TRUCKS signs on SW 'C' Ave from SW 2 nd Street to SW 6 th Street	
Description of Intersection / Location: Downtown commercial district	
Accident Report Listing:	
WARRANTS (MUTCD/City Code/City Policy): MUTCD Section 2B.39 Selective Exclusion Signs: If used, Selective Exclusion signs shall clearly indicate the type of traffic that is excluded. No Trucks (R5-2). The NO TRUCKS (R5-2a) word message sign may be used as an alternate to the No Trucks (R5-2) symbol sign.  Lawton City Code 23-12-1201 - Designation of truck routes—Permits—Signs. The city council, by resolution, may prohibit the passage of trucks in general or trucks of particular kinds over or upon designated streets and thoroughfares. The city manager may prescribe routes for the use of trucks in general or trucks of particular kinds or other vehicles which are not ordinarily private passenger vehicles. The drivers of any such trucks or other vehicles as may be specified in such resolution shall not use those streets or thoroughfares upon which such vehicles are prohibited or shall keep on such routes as are designated, and shall not deviate therefor except in case of an emergency. Any such prohibited vehicles may use streets or thoroughfares when necessary when engaged in an intracity activity or when making pickups or deliveries in the vicinity of any such designated street the police department may, when health, safety and property would not be adversely affected, issue permits in writing as exceptions to such resolutions. Signs shall be erected upon streets designating any applicable restrictions.	
Previous Action:	
Previous Traffic Commission Recommendation(s):	
Previous City Council Decision(s):	
Action Recommended by Staff: Deny request for installation of NO TRUCKS signs. Commercial district relies on frequent deliveries. Future lighting should be installed at height that will not be impacted by trucks	
Traffic Engineer: Larry Wolcott	
Considered by Traffic Commission: 7-16-20	
Considered by City Council: 8-11-20	



TRAFFIC ISSUE REQUEST

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Requested by: City Manager, Michael Cleghorn	Request Number: 20-7
Address:	Date Request Received: 6-1-20
City, State, Zip: Lawton, OK	Phone/Email: 581-3301
Request: Adopt traffic calming policy	
Description of Intersection / Location: local and collector streets, 25 MPH	
Accident Report Listing:	
WARRANTS (MUTCD/City Code/City Policy): Draft Neighborhood Traffic Calming Policy can be used to systematically coordinate installation of traffic calming devices such as speed tables.	
Previous Action:	
Previous Traffic Commission Recommendation(s):	
Previous City Council Decision(s):	
Action Recommended by Staff: Adopt Neighborhood Traffic Calming Policy	
Traffic Engineer: Larry Wolcott	
Considered by Traffic Commission: 7-16-20	
Considered by City Council: 8-11-20	



TRAFFIC ISSUE REQUEST

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Requested by: Max Sasseen	Request Number: 20-8
Address: 1701 NW Cache Road	Date Request Received: 6-29-20
City, State, Zip: Lawton, OK	Phone/Email: 248-8817
Request: Authorize installation of traffic signals by private developer at the intersection of NW 50 th Street and Cache Road in accordance with the traffic impact study.	
Description of Intersection / Location: NW 50 th and Cache – intersection of local street/private development with principal arterial. Intersection is approximately 800' west of existing signal at NW 44 th Street.	
Accident Report Listing:	
WARRANTS (MUTCD/City Code/City Policy): MUTCD warrant analysis indicates that the intersection satisfies the p.m. peak hour vehicular volume warrant under the 2021 projected traffic volumes.	
Previous Action:	
Previous Traffic Commission Recommendation(s):	
Previous City Council Decision(s):	
Action Recommended by Staff: Authorize installation of traffic signals by private developer at the intersection of NW 50 th Street and Cache Road in accordance with the traffic impact study.	
Traffic Engineer: Larry Wolcott	
Considered by Traffic Commission: 7-16-20	
Considered by City Council: 8-11-20	



TRAFFIC IMPACT STUDY

**Proposed Development Site
Cache Road and NW 50th Street
Lawton, OK**

**Prepared for:
Eddie Cordes, LLC
May 2016**

**Prepared by:
Traffic Engineering Consultants, Inc.**




**B.J. Hawkins, P.E., PTOE
Oklahoma P.E. #25164
CA # 1160**

5/11/16
Date



1.0 INTRODUCTION

Traffic Engineering Consultants, Inc. (TEC) was retained by Eddie Cordes, LLC to perform a traffic impact study for a proposed development site to be located in Lawton, Oklahoma. The study was requested to determine the effects the proposed development site would have on the adjacent street system, to review the available access to the development site and to provide recommendations for improvements that may be necessary to accommodate the traffic expected to be generated by the development site.

2.0 BACKGROUND

The proposed development site is located south of Cache Road/Quanah Parker Trailway opposite NW 50th Street shown in **Figure 1**. There are currently no definitive tenants to build on the 11.6 acre site. Due to the uncertainty of the vacant site, assumptions had to be made for the land uses and square footages. The *Shopping Center* land use category encompasses a wide array of land uses including retail, office, restaurants and more and would be appropriate for all businesses proposed for this development site. The square footage was estimated using a floor-to-area ratio of 0.20 which is commonly used in traffic impact studies to estimate square footage. The southern 3.8 acres of the site has been sold to the mini-storage facility east of the site. The land will develop as mini-storage and will provide access through the existing mini-storage facility. There will be no shared access with the proposed development site and, therefore, this parcel of land will be excluded from the study.

Access to the development site is proposed via two existing right-in/right-out drives on Cache Road and one proposed full-access drive opposing NW 50th Street at the existing median opening on Cache Road. Cache Road is a six lane divided principal arterial. It has a posted speed limit of 45 mph and carries an approximate average daily traffic (ADT) of 31,500 vehicles per day in the area. Quanah Parker Trailway splits off/joins Cache Road west of NW 50th Street. The intersection of Cache Road and NW 50th Street is currently unsignalized and controlled via southbound stop sign. The intersection of Cache Road and NW 44th Street is currently signalized and located approximately 810 feet east of NW 50th Street.

3.0 TRAFFIC DATA COLLECTION

Existing traffic volume data was collected adjacent to the proposed development site in March of 2016. Peak hour turning movement volumes were collected at the intersections of Cache Road and NW 50th



FIGURE 1. Proposed Development Site
Cache Rd. and NW 50th St.
Lawton, OK

Street and Cache Road and NW 44th Street. The data was collected during the a.m. (7:00 to 9:00) and p.m. (4:00 to 6:00) peak hour periods. Given the traffic characteristics in the area and the anticipated trip generation for the proposed development, the weekday peak periods would represent a “worst-case scenario” with regards to traffic impact on the surrounding roadway network. If traffic operations are acceptable during these weekday peak hours, it can be reasoned that conditions would be acceptable throughout the remainder of the day and week. Additionally, 24-hour traffic volume data was collected on Cache Road and NW 47th Street. The 2016 existing traffic is summarized in **Figure 2** and detailed printouts of all the traffic count data are included in the appendix.

The 2016 existing traffic was then utilized to determine the background traffic for 2021. The timeline for developing the site is currently unknown at this time, so for the sake of the study the 2021 design period was selected as a future design year. The background traffic was determined for the 2021 by applying an average annual growth rate of 2% to the 2016 existing traffic. The Lawton Metropolitan Planning Organization *2040 Metropolitan Transportation Plan* indicated that vehicular growth on Cache Road in the area of the study site has been stagnant since 2003. However, to be conservative the commonly used 2% annual growth rate was utilized to grow the background traffic volumes. The 2021 projected background traffic is summarized in **Figure 3**.

4.0 PROJECTED TRAFFIC

To determine the effects a new development will have on an existing street system, the new or additional traffic must be projected. The latest edition of the *Trip Generation Manual*, published by the Institute of Transportation Engineers, was used to determine the amount of traffic the development is expected to generate. The report is a nationally accepted reference which provides trip rates for determining the traffic expected to be generated by different land use types.

Available information was utilized regarding the anticipated land use to determine the site generated traffic. The *Shopping Center* category was selected to determine the trip generation for the proposed development site. The resulting traffic volumes projected to be generated by the site once it is fully developed are indicated in **Table 1**.



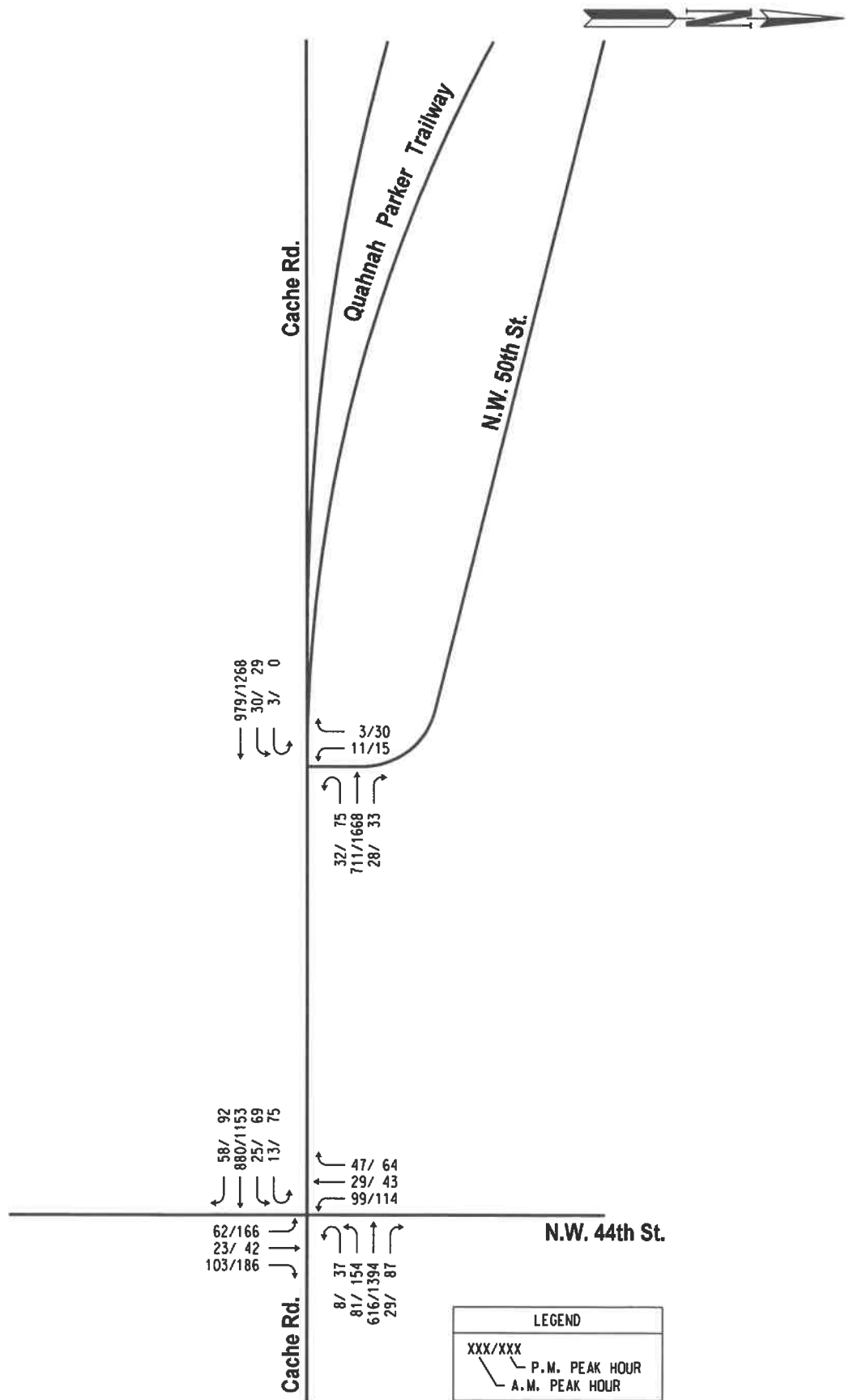


FIGURE 3. 2021 Projected Background Traffic

TABLE 1
PROJECTED SITE GENERATED TRAFFIC VOLUMES

Building Type (Land Use)	FTE Land Use Code	Approximate Gross Floor Area or Other	Avg. Weekday Vehicle Trip Ends			Average AM Peak Hour Directional Distribution		Average AM Peak Hour Directional Volume (vph)		Average PM Peak Hour Directional Distribution		Average PM Peak Hour Directional Volume (vph)	
			Per Day	Per Peak Hour of Adjacent Street Traffic									
				One Hour Between 7am & 9am	One Hour Between 4pm & 6pm								
				(vpd)	(vph)	(vph)	IN	OUT	IN	OUT	IN	OUT	IN
Trip Rate* Shopping Center	820	(sf) 101,060	67.66	155	597	0.62	0.38	97	60	0.48	0.52	289	314
			6,838	157	603								

* Trip Rates from "TRIP GENERATION", 9th Ed., Vol. 3 of 3, Institute of Transportation Engineers.

The traffic expected to be generated by the proposed development site was then distributed among the surrounding street system as well as the various points of access for the a.m. and p.m. peak hours. The distribution of the site generated traffic was based on anticipated usage of the site and traffic patterns in the area which were obtained from the traffic data that was collected for this study and is summarized in **Figure 4**. The directional distribution of the site generated traffic for the proposed development site is expected to be:

- 45% to/from Cache Road east of the development
- 40% to/from Cache Road/Quanah Parker Trailway west of the development
- 08% to/from NW 44th Street northeast of the development
- 05% to/from NW 44th Street southeast of the development
- 02% to/from NW 50th Street north of the development

The projected site generated traffic was then added to the background traffic for the 2021 design year. The 2021 projected combined traffic (2021 projected background traffic + site generated traffic) for each access point to the proposed development site, as well as the surrounding street system, are summarized in **Figure 5**.

5.0 CAPACITY ANALYSIS

The capacity analyses were conducted using *Synchro 9.0*, which is a software package for modeling and optimizing traffic signal timings at signalized intersections and analyzing unsignalized intersections in accordance with the methodology of the latest edition of the *Highway Capacity Manual*. The *Highway Capacity Manual* is published by the Transportation Research Board of the National Research Council, Washington, D.C. The information has been widely accepted throughout the U.S. as a guide for defining

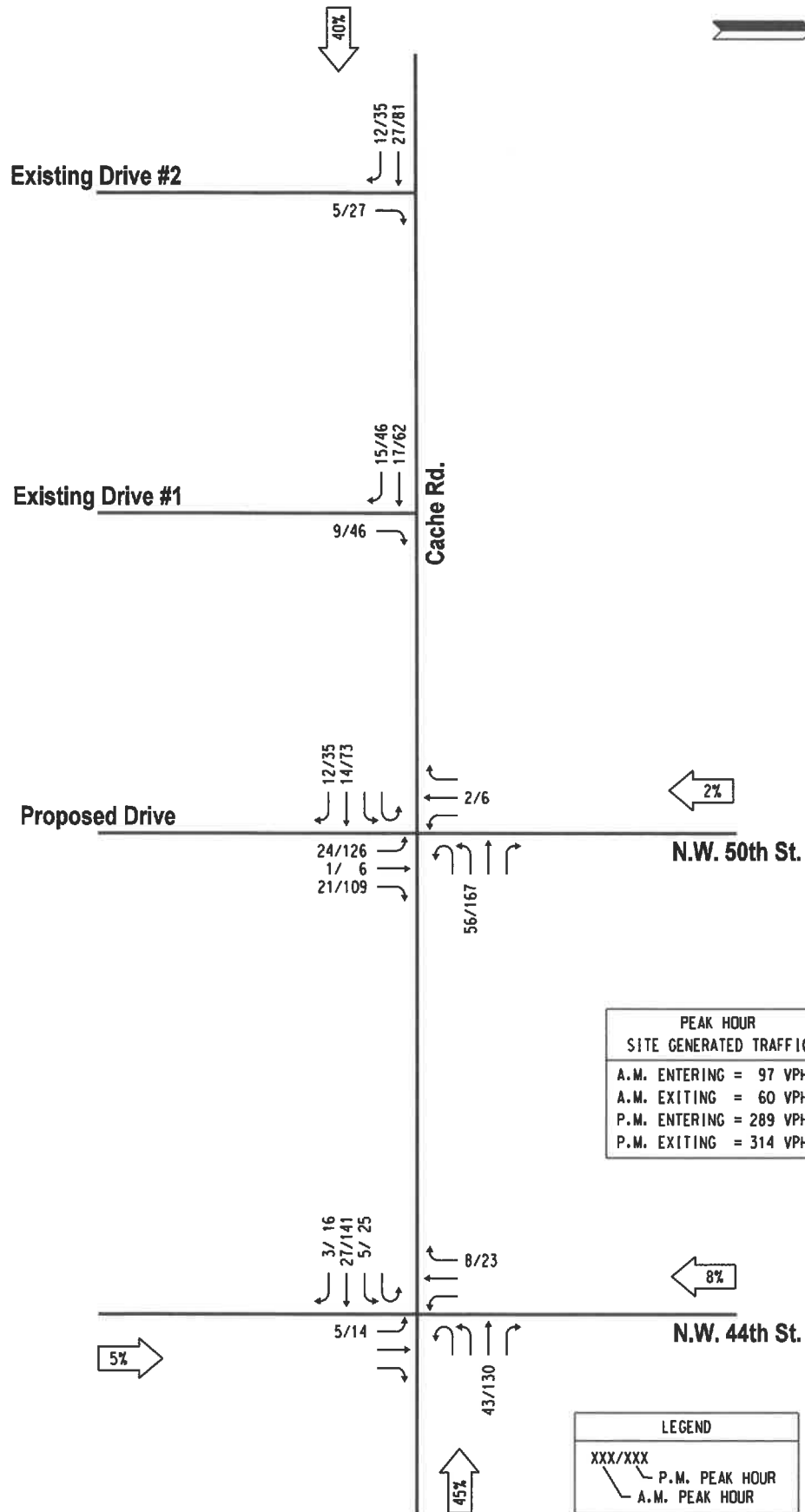


FIGURE 4. Distribution of Site Generated Traffic



Existing Drive #2

5/27

12/ 35
569/820

Existing Drive #1

9/46

15/ 46
559/801

Cache Rd.

Proposed Drive

12/ 35
993/1341
30/ 29
3/ 0
24/126
1/ 6
21/109

3/30
2/ 6
11/15

N.W. 50th St.

32/ 75
56/ 167
711/1668
28/ 33

N.W. 44th St.

61/ 108
907/1294
30/ 94
13/ 75
67/180
23/ 42
103/186

55/ 87
29/ 43
99/114

8/ 37
81/ 154
659/1524
29/ 87

LEGEND	
xxx/xxx	P.M. PEAK HOUR
xxx/xxx	A.M. PEAK HOUR

FIGURE 5. 2021 Projected Combined Traffic



and solving transportation challenges. The information is approved and distributed by the U.S. Department of Transportation, Federal Highway Administration.

The capacity analysis provides a measure of the amount of traffic that a given facility can accommodate. Traffic facilities generally operate poorly at or near capacity. The analysis is intended to estimate the maximum amount of traffic that can be accommodated by a facility while maintaining prescribed operational qualities. The definition of operational criteria is accomplished using levels-of-service. The concept of levels-of-service is defined as a qualitative measure and describes operational conditions in terms of such factors as speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience, and safety. Six levels-of-service are defined for each type of facility for which analysis procedures are available. They are given letter designations, from "A" to "F", with level-of-service "A" representing the best operating conditions and level-of-service "F" the worst.

The average control delay for signalized intersections is estimated for each lane group and aggregated for each approach and for the intersection as a whole. The level-of-service for this type of traffic control is directly related to the control delay value. The level-of-service criteria for signalized intersections are indicated below.

SIGNALIZED INTERSECTIONS

Level-of-Service	Control Delay per Vehicle (s/veh)
A	0-10
B	> 10-20
C	> 20-35
D	> 35-55
E	> 55-80
F	> 80

The criteria for stop controlled or unsignalized intersections have different threshold values than do those for signalized intersections. A higher level of control delay has been determined to be acceptable at a signalized intersection for the same level-of-service. The level-of-service criteria for unsignalized intersections are indicated below.

UNSIGNALIZED INTERSECTIONS

Level-of-Service	Control Delay per Vehicle (s/veh)
A	0-10
B	> 10-15
C	> 15-25
D	> 25-35
E	> 35-50
F	> 50

Capacity analyses were conducted for the a.m. and p.m. peak hours at each access point to the proposed development as well as the intersections of Cache Road and NW 44th Street. The intersections were analyzed and reviewed under the 2016 existing traffic, 2021 projected background traffic and 2021 projected combined traffic. For purposes of this report, an overall intersection level-of-service “D” or better and a critical approach (approach with the lowest level-of-service) level-of-service “E” or better was considered an acceptable level-of-service. The results of the capacity analyses conducted are summarized in **Table 2** and the raw data sheets have been included in the appendix.

TABLE 2
Intersection Capacity Analysis Results

Intersection	Type of Traffic Control	AM Peak Hour				PM Peak Hour			
		Critical Approach		Intersection		Critical Approach		Intersection	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
		(sec/veh)		(sec/veh)		(sec/veh)		(sec/veh)	
2016 Existing Traffic									
Cache Road and NW 50th Street	Unsignalized	19.0 / SB	C	0.6	A	60.8 / SB	F	1.5	A
Cache Road and NW 44th Street	Signalized	24.6 / SB	C	17.2	B	31.1 / SB	C	26.7	C
2021 Projected Background Traffic									
Cache Road and NW 50th Street	Unsignalized	21.4 / SB	C	0.6	A	101.8 / SB	F	2.1	A
Cache Road and NW 44th Street	Signalized	25.7 / SB	C	18.3	B	37.3 / WB	D	33.5	C
2021 Projected Background Traffic + Site Generated Traffic									
Cache Rd. and NW 50th St./Proposed Dr.	Signalized	26.4 / EB	C	18.0	B	39.8 / SB	D	18.8	B
Cache Road and NW 44th Street	Signalized	48.0 / SB	D	28.6	C	74.5 / SB	E	37.3	D
Cache Road and Existing Drive #1	Unsignalized	10.3 / NB	B	0.2	A	12.2 / NB	B	0.6	A
Cache Road and Existing Drive #2	Unsignalized	10.3 / NB	B	0.1	A	12.0 / NB	B	0.4	A

The analyses conducted under the 2016 existing traffic indicated that the critical approach (southbound movement) at the intersection of Cache Road and NW 50th Street currently operates at level-of-service “F” during the p.m. peak hour. Under the 2021 projected background traffic, the critical movement at the intersection would continue operating at level-of-service “F” during the p.m. peak hour.

The critical movement at the intersection of Cache Road and NW 50th Street operates at level-of-service “F” during the p.m. peak hour which is typical for side street traffic turning onto a busy arterial during the peak hours of the day. The addition of the proposed development traffic and Proposed Drive opposite NW 50th Street will add much more side street traffic and delay to the intersection. As a result, once the proposed development site traffic was added to the 2021 background traffic, the intersection was analyzed with a traffic signal installed. Under the 2021 projected combined traffic, each intersection would be expected to operate at acceptable levels-of-service during the a.m. and p.m. peak hours.

6.0 TRAFFIC SIGNAL WARRANT ANALYSIS

In order to determine the need for additional traffic control measures at the intersection of Cache Road and NW 50th Street/Proposed Drive, a traffic signal warrant analysis was conducted. The analysis was conducted in accordance with the *Manual on Uniform Traffic Control Devices (MUTCD)*. This publication is a federally approved publication which governs the traffic engineering practices across the country. The MUTCD has eight sets of thresholds or “warrants” that may be evaluated at an intersection to determine whether or not a traffic signal should be considered to reduce accidents or delay. If one of the warrants is met the installation of a traffic signal should be considered.

Due to the unknowns surrounding the development site, only the peak hour traffic volumes were generated and analyzed and, therefore, only the peak hour vehicular volume warrant was evaluated. The results indicated that the intersection of Cache Road and NW 50th Street/Proposed Drive easily satisfied the peak hour vehicular volume warrant during the p.m. peak hour under the 2021 projected combined traffic. The computer printouts of the warrant analysis have been included in the appendix.

7.0 CONCLUSIONS AND RECOMMENDATIONS

TEC was requested to conduct a traffic impact study on a proposed commercial development site in Lawton, Oklahoma. Existing traffic volume data was collected adjacent to the proposed development site. The 2016 existing traffic was utilized to determine the background traffic for 2021 by applying an average annual growth rate of 2% for five years. The 2021 design period was selected as a future design year since no current development date is known at this time. The proposed development site traffic was determined and added to the 2021 projected background traffic for conducting the reviews and analyses.



The analyses conducted under the 2016 existing traffic and 2021 projected background traffic indicated that the critical movement at the intersection of Cache Road and NW 50th Street would operate at level-of-service "F" during the p.m. peak hour.

A traffic signal warrant analysis was conducted at the intersection of Cache Road and NW 50th Street/Proposed Drive and the analysis determined that the intersection easily satisfied the peak hour vehicular volume warrant under the 2021 projected combined traffic. Once the site generated traffic was applied to the 2021 background traffic and traffic signal installed, each intersection would be expected to operate at acceptable levels-of-service during the a.m. and p.m. peak hours.

Based on the review and analyses, the construction of Proposed Drive at the existing median opening opposite NW 50th Street would be a sensible location and depending on how the property is developed, it is likely that a traffic signal would be required at the intersection of Cache Road and NW 50th Street/Proposed Drive. The westbound left turn lane at the intersection currently provides 100 feet of storage and a 100 foot taper. A queuing analysis was conducted on the intersection and it was determined that once the property develops, the westbound left turn lane will require 104 feet of storage during the a.m. peak hour and 136 feet of storage during the p.m. peak hour. It is recommended that once the site is developed, the westbound left turn lane be extended to include a minimum of 150 feet of storage and a 100 foot taper. The computer printouts of the warrant analysis have been included in the appendix.

The intersection of Cache Road and NW 44th Street is signalized and located approximately 800 feet to the east of NW 50th Street. It is recommended that if a traffic signal is installed at the intersection of Cache Road and NW 50th Street, it is coordinated with the traffic signal at Cache Road and NW 44th Street to prevent backups and delay between the closely spaced intersections.

NEIGHBORHOOD TRAFFIC CALMING POLICY



**CITY of LAWTON
OKLAHOMA**

July 2020

INTRODUCTION

One of the most persistent and emotional complaints that the City of Lawton receives is speeding on residential streets. Each year, there are numerous requests received by City council members and other City administration and staff to “do something” on certain streets where residents have concerns about excessive traffic speeds and/or traffic volumes. Proper street design is essential in encouraging lower speeds, minimizing cut-through traffic, and maintaining the integrity of residential neighborhoods. Through the platting and development process, new subdivisions are now being designed to avoid long straight stretches of streets which encourage higher speeds. It is on the long stretches of existing streets that most of the speeding complaints are being generated. This policy presents a program aimed at making existing residential streets safer and more livable. Historically, issues of speeding and cut-through traffic could only be addressed through educational efforts, beefed-up police enforcement, and the unwarranted use of regulatory signs; now, however, physical calming devices have been developed for use when education and enforcement endeavors have failed.

TRAFFIC CALMING TECHNIQUES

Traffic calming is the combination of both policies and implementation measures that help mitigate the negative impacts to residential streets and neighborhoods caused by motor vehicles. Although traffic calming techniques did not begin to be readily implemented in the United States until the 1980's, there are many examples that have existed for many years in other countries. In Europe and Australia, some of these same techniques even preceded the 1970's. Many of the successful techniques used there are into their second and third generations. Their effectiveness has been proven and many appear to be part of the original street design rather than retrofits.

Traffic calming techniques were developed to reduce speeding problems and heavy flow on residential streets. By making some residential streets more “calm,” it makes the neighborhood more livable. Although “livable” in terms of a neighborhood does not have a precise definition, feeling safe and secure, interacting with neighbors, and experiencing a sense of home and community identification are certainly some of the characteristics. In essence, when citizens call to request a STOP sign to slow traffic on their street, they are requesting the City to make their street more livable.

Research has shown a common theme among cities with traffic calming or management programs: there is no single measure, such as STOP signs or speed tables, for solving all traffic problems. Each location has its own unique set of problems that must be analyzed to identify solutions.

STREET CLASSIFICATION

City of Lawton streets are classified by their function into three major categories: arterial, collector, and local. These categories are defined as follows:

Arterial: These streets provide for through traffic movement over long distances such as across the city with some access to abutting property. These streets are typically the widest and have the highest speed limits of all of the streets within the city. Within the City of Lawton, most arterials have a speed limit of 40 mph or higher.

Collector: These streets provide the connection between arterials and local streets. There is often direct access to abutting properties. These streets provide for medium distance trips such as between neighborhoods. They also collect traffic from the local streets and channel it to the arterial system. Within the City of Lawton, most collector streets have a speed limit of 25 mph or higher.

Local: These streets provide for direct access to the residences and for short distance or local traffic movements. Within the City of Lawton, most local streets have a speed limit of 25 mph.

Since each city street has an intended purpose related to moving traffic and serving the adjacent land use, it must be ensured that traffic management measures are compatible with those purposes. Because the installation of calming devices can result, directly or indirectly, in drivers shifting to use an adjacent street as their new route, this is appropriate only if that adjacent street is suitably classified and able to accommodate this traffic. Accordingly, while the majority of traffic management measures in the calming toolbox are appropriate for use on local streets and collectors, most measures, such as speed tables, are not appropriate on arterials.

DEFINITION OF TRAFFIC CALMING

The Institute of Transportation Engineers (ITE) defines traffic calming as follows:

Traffic calming is the combination of mainly physical measures that reduce the negative effects of motor vehicle use, alter driver behavior and improve conditions for non-motorized street users.

In explaining its definition, the ITE subcommittee distinguishes traffic calming from route modification, traffic control devices, and streetscaping. Traffic calming measures rely on the laws of physics rather than human psychology to slow down traffic. Route modification measures, such as street closures and turn restrictions, do not change driver behavior (i.e. speed), but simply modify driver routing options. Traffic control devices, notably STOP signs and speed limit signs, are regulatory measures that require enforcement. Street trees, street lighting, striping, and other streetscape elements, while

complementary to traffic calming, do not directly compel drivers to slow down. By contrast, engineered traffic calming measures are intended to be self-enforcing.

OBJECTIVES

The overall objectives for the *Neighborhood Traffic Calming Policy* are:

- To implement measures, either physical or psychological, that will safely reduce speeding and affect driver behavior to improve the livability and quality of life in residential neighborhoods;
- To preserve and enhance pedestrian and bicycle access to neighborhood destinations;
- To encourage citizen involvement in neighborhood calming and, in the process, provide an opportunity for neighbors to interact and create a positive community atmosphere; and
- To make fair and efficient use of City resources in prioritizing projects to balance the needs of the neighborhood with that of the entire community.

Traffic calming techniques work best when incorporated into a neighborhood traffic management program. Successful programs include good traffic data collection, a thorough planning process, community participation, and local authority support. Because residents are the main initiators of traffic calming requests, they need to be part of the process as much as possible.

NEIGHBORHOOD TRAFFIC CALMING PROCESS

Step 1 – Reporting the problem

Upon initial contact made by a resident, property owner, or homeowners association, inquiring about traffic calming in a neighborhood, City staff will mail to the requester an information packet, including a copy of the Neighborhood Traffic Calming Application Form.

After reading the information, if residents are still interested in the program, they must complete the application form and return it to the City. The purpose of this form is to initiate the process and to formally request a traffic study be conducted to see if the neighborhood meets the criteria; it is not a petition for traffic calming measures (that comes later in the process). The application form requires a written description of the residents' concerns and requires signatures from residents of at least four (4) different households in the impacted area that share the same traffic concerns to warrant such a traffic study.

Step 2 – Traffic Study

Upon receipt of a completed Neighborhood Traffic Calming Application Form, the City Traffic Control Division will schedule a traffic study in the neighborhood. Traffic studies are usually conducted during the school year unless unique circumstances, as determined by the City Traffic Engineering staff, exist. To be eligible, certain speed and traffic volume criteria must be met.

Step 3 – Pre-Calming Measures

If the trouble location meets the speed and volume criteria, City staff will first suggest possible solutions that do not involve the use of physical controls or impediments on the street. These include:

- Traffic Signing and Pavement Markers - Traffic engineering staff will review all of the traffic signing and pavement markers in the area. If necessary, staff will install additional signing and striping.
- Traffic Enforcement Actions - The traffic data study will include raw counts of traffic volumes obtained by the traffic engineer and vehicle speeds over a 72-hour period and will categorize these numbers into the time of day that they occurred. This data will be forwarded to the Lawton Police Department for their increased patrol visibility and more strategic enforcement efforts.
- Radar Speed Sign Deployment - This is a temporary device that is primarily used to educate motorists regarding the fact that they may be significantly exceeding the posted speed limit.

Step 4 - Follow-up Data Collection

If one or more of the Pre-Calming Measures is implemented, the City Traffic Control Division and the LPD will wait approximately three to six months and then collect additional speed/volume data. The new data will be analyzed to determine if the Pre-Calming Measure was successful. If the measure was successful in terms of bringing the numbers below the criteria thresholds, then the process will end at this point. If the measure was not successful, i.e. the location continues to exceed speed/volume thresholds, City staff will move on to explore the installation of physical traffic calming measures such as speed tables.

Step 5 - Petition Process

City staff will provide a petition form to be signed by residents and business owners adjacent to the street being “calmed.” A map showing the location of the traffic calming device and the petition boundary area will also be included. This petition must document that at least 75% of all households and businesses adjacent to or fronting the street support the installation. All properties within 300’ of the proposed location must be accounted for (either with signature in support of plan, or without signature in opposition to plan) or by written statement why a specific property was not represented. Only one signature per household is allowed. Petition shall indicate if signer is property owner or owner’s agent/representative. Petitions must be completed and returned to the City

within six (6) months from the date they were provided to the neighborhood coordinator or they will expire.

Petition Eligibility

Residences within 300' that are either fronting or otherwise directly adjacent to the street containing the proposed traffic calming measure will be eligible to sign the support petition for the calming project. Signers can be either the property owner or his/her agent. The signature of any official representative of a business, church, school, homeowner's association clubhouse, etc. will be accepted for non-residential petitioners.

Step 6 - Implementation and Funding

Having verified the signatures on the petition, City staff will finalize traffic calming plans, prepare cost estimates, and enter into an agreement with a contractor or utilize City forces to perform the work subject to available funding. Traffic calming projects are funded primarily from public funding; however, when public funds are not available, private funding is a possibility. Any private funding must be collected on a volunteer only basis and presented to the Lawton City Council for acceptance prior to construction.

Step 7 - Follow-up Evaluation

When construction of a traffic calming project is finished, the City Traffic Engineer will conduct a final traffic study to evaluate the effectiveness of the calming device(s). Additionally, City staff will send out a Feedback Survey to neighborhood residents as part of the evaluation process.

QUALIFYING CRITERIA

To qualify for actions relating to the *Neighborhood Traffic Calming Policy*, a neighborhood residential street must meet the following minimum criteria:

- Must be classified as a local street or a collector with a speed limit of 25 mph
- 85th Percentile Speed of vehicles on roadway $\geq$ 34 mph
- Average Daily Traffic (ADT) $>$ 600 vehicles/day (vpd)

85th Percentile Speed is that speed below which 85% of all traffic units' travel. It is an accepted principle that the majority of drivers on a roadway select safe and proper speeds based on roadway and traffic conditions. For determining a speeding problem on a specific roadway, the 85th percentile speed is often used because it is on the high end of a "normal" bell curve distribution. Typically, recorded speeds above the 85th percentile occur much less frequently than the speeds below it because the highest speeds are often erroneous readings or the result of a few drivers who are either unperceptive of roadway conditions or irresponsible. The generally accepted traffic engineering practice is to set speed limits at the nearest increment to the 85th percentile speed unless other considerations such as accidents and real dangers not perceivable by drivers may indicate the need for a lower speed limit. Since speed limits are generally set using the 85th

percentile, it is expected that 15% of the vehicles will exceed the speed limit on a regular basis.

PRIORITIZATION OF PROJECTS

For the purpose of prioritizing projects competing for traffic calming dollars in each Council Ward, points are assigned based on the following point system:

No. of mph that the qualifying 85th

Percentile Speed is over posted speed limit: > 7 mph = 5 points
> 12 mph = 7 points
> 15 mph = 9 points

No. of mph that the qualifying 95th

Percentile Speed is over posted speed limit: > 14 mph = 5 points

Average Daily Traffic (ADT):

>500 to 700 vpd	= 2 points
>700 to 900 vpd	= 3 points
>900 to 1,100 vpd	= 4 points
>1,100 vpd	= 5 points

No. of reported speed-related accidents:

(last 12 month period)	2 – 3	= 2 points
	4 – 5	= 3 points
	6 – 10	= 5 points
	>10	= 7 points

Competing projects are ranked according to their sums of the above assigned points.

IMPACTS OF TRAFFIC CALMING DEVICES

Overall Effectiveness –

The physical actions of calming devices are almost always successful (to varying degrees) in forcing traffic to behave in an intended fashion. In most cases, these devices can achieve the desired result by utilizing a one-time capital expenditure and very low ongoing maintenance costs.

Effect on Emergency Vehicles Response Times –

Creating bumps, dips, and sharp curves is precisely the objective being sought by many of the calming devices and, of course, these maneuvers can negatively impact emergency vehicles response times. Quantitatively, research shows that both vertical and horizontal displacement devices can delay ambulances and fire trucks from 2 to 10 seconds per device. It is important in the engineering of these devices that locations and sizes of these types of devices be carefully considered

to mitigate such delays. Where applicable, “test” runs of emergency vehicles will be made before installation of permanent devices.

Loss of Parking –

It is often necessary to prohibit on-street parking in the immediate vicinity of certain traffic calming devices in order to accommodate the realigned vehicle path. In these cases, the adjacent residents should be aware that a loss of on-street parking in front of their residences will occur.

Aesthetic Impacts –

While some traffic calming devices can have favorable aesthetic impacts and enhance neighborhoods when beautifully landscaped, others can be, by their nature, somewhat unsightly. Speed tables could have negative visual impacts. In fact, virtually all traffic calming actions require signs, striping, and reflective devices which may not be construed as aesthetically pleasing to all residents. In the end, however, most residents feel that this is a minor trade-off for the calming benefits they are receiving.

REMOVAL OF TRAFFIC CALMING DEVICES

Devices installed for the purpose of calming traffic in residential areas may be removed or significantly modified only when all of the following criteria have been met:

- At least 75% of the residents and/or property owners (one signature per residence) living within 600’ of the device in question must agree, by petition, to remove it.
- The calming device must have been in place twelve months or longer before being considered for removal.
- The City Traffic Engineer agrees that its removal will not affect the overall effectiveness of the calming efforts in the neighborhood.
- Funding, either from City or private residential sources, must be available to restore or modify the device.